

**Missouri Department of Health, HSEES Program
FFY'2000 Prevention Outreach Plan – Summary of Activities**

PREVENTION ACTIVITY #1

Description:

Fact sheets were developed on the five substances most frequently released in Missouri during the five-year data analysis period (1994-1998). These substances include ammonia, sulfuric acid, polychlorinated biphenyls (PCBs), ethylene glycol, and hydrochloric acid. Fact sheets were targeted to facilities that use, handle, transport, manufacture and/or store any or all of these five substances.

Summary of Activities:

A mailing list of 4,180 facilities was compiled based on information from the Department of Natural Resources, the Department of Labor and Industrial Relations, and facilities that had HSEES events since January 1, 1994. Surveys were mailed on March 22, 2000 to determine which facilities used, manufactured, transported and/or stored any or all of the top five substances released during the five-year data analysis period. (Facilities were also surveyed on mercury, lead and chlorine in anticipation of one of the prevention activities for FFY'2001.) Of these, 416 were returned because the business had closed or the address was incorrect and a new address could not be found, resulting in a final total of 3,764 surveys being delivered. 2,370 surveys were returned for a response rate of 63%. Information from the surveys was collected in a database and appropriate fact sheets were mailed to 789 facilities on May 19. Fact sheets have also been distributed during five statewide, regional and national presentations given by the HSEES Coordinator.

Fact sheets continue to be a very popular item among participants at conferences and training sessions. Over 300 sets of the fact sheets have been distributed at presentations given by the HSEES Coordinator during 2001. (See the 2001 Summary of Activities for presentation information.) Several other HSEES states have asked to use the Missouri format for fact sheets being developed. Due to limitations in technology, we do not have information on how many individual fact sheets were downloaded or printed from the HSEES web site; however, it is thought that the number would be considerable due to the number of hits the site has received within the past year.

Lessons Learned:

Although the HSEES program fact sheet was enclosed with the survey, a substantial number of calls were received by the HSEES Coordinator from facilities that had questions about the program, or thought that the HSEES program was another regulatory program they would be required to report to. These calls have alerted us to the fact that significant efforts should be made to increase awareness of the existence and purpose of the HSEES program among various industries in the state.

Evaluation Measures:

This activity provided us with the opportunity to share information with over 3,700 facilities in Missouri. Based on the response and the number of facilities that received targeted substance fact sheets, we believe that this activity significantly increased awareness of the program, in addition to providing educational materials on specific substances to over 780 facilities. Several facility managers have contacted the HSEES Coordinator to provide positive comments regarding the format and content of the fact sheets, and indicated that the fact sheets would be very beneficial for employee training and education on specific substances.

Initial effectiveness measures indicated this activity would be considered successful if a decrease of 10% or more is noted in the number of events involving any of the top five substances released during 2001, when compared to the baseline set in 2000. The percentage of change is indicated in the table below:

Substance	2000 Events *	2001 Events *	% Change
Ammonia	17	23	26.0
Sulfuric acid	12	9	-25.0
PCBs	9	5	-44.4
Ethylene glycol	10	3	-70.0
Hydrochloric acid	2	6	300.0

* Methamphetamine-related events were excluded from these effectiveness measures analyses. Specific prevention activities geared toward preventing adverse human health outcomes have been initiated and included in the 2002 plan.

PREVENTION ACTIVITY #2

Description:

Quarterly reports summarizing information on the number of events per county, victims, injury outcomes, evacuations, and substances released have been developed for the 10 counties with the highest five-year total number of events (1994-1998). Each report also contains information on interesting events that have occurred in the county during calendar year 2000. These reports are distributed to the county emergency management director, Local Emergency Planning Committee (LEPC), county and local fire and police departments, county government officials, area hospitals, local public health agencies, and other interested parties.

The ten counties with the highest number of events include:

- Boone
- Clay
- Greene
- Jackson
- Jasper
- Jefferson
- Marion
- St. Charles
- St. Louis
- St. Louis City

Summary of Activities:

Current mailing lists were obtained from the appropriate agencies for each of the 10 counties. As soon as the 2000 data became available for download on May 11, the first quarter report was prepared and was mailed on May 31, 2000. The second quarter report was mailed on August 15, 2000. The third quarter report was mailed on October 23, 2000. All quarterly reports are available on the HSEES web site for downloading and printing. The initial prevention outreach plan stated that reports would be sent to fixed facilities in these 10 counties that had at least one reportable event during 1999; however, this information is currently encrypted in the new web based data system and has not yet been made available to the HSEES Coordinator in the data download.

We continued this activity during 2001, even though it was not included as part of our 2001 Prevention Outreach Plan. A survey was sent with the third quarter, 2001 report to determine how beneficial these reports are to the agencies that receive them, what information should be included that is not currently provided, what information is not considered helpful, and whether or not the majority of agencies feel this activity should be continued.

Of the 396 surveys mailed, 149 (38%) were returned as of December 31, 2001. Table 1 outlines which types of agencies provided responses. (The percentage in this table represents the number of responses received from each type of agency divided by the total number of agencies in each particular category – not on the total number of surveys received.)

Table 1: Survey Responses by Agency Type

Type of Agency	No. of Responses	Percent
Local Public Health Agency	8	61.5
Hospital	25	45.5
Emergency Management	7	41.2
Fire Department	56	39.4
Police Department	50	29.8
Other	3	N/A

The survey was also used to determine when the majority of recipients considered the reports to be timely. The responses are outlined in Table 2. Based on this data, future reports will be sent within 15 days after the end of the quarter.

Table 2: Timeliness of Reports

Time after End of Quarter	No. of Responses	Percent
Less than 7 days	3	2.0
7 – 14 days	24	16.1
15 – 29 days	27	18.1
30 – 44 days	59	39.6
45 – 60 days	8	5.4
Not answered	28	18.8

Of the 149 surveys returned, 55 (27.1%) indicated an awareness of the HSEES program prior to receiving the quarterly reports. Nine learned of the program through a web search; 28 from presentations previously given by the HSEES Coordinator; four from the Missouri Epidemiologist annual HSEES summary; and 12 from other sources. The remaining 94 respondents were not aware of the program prior to receiving the quarterly reports.

The survey was used to determine what additional information should be included on future quarterly reports. Table 3 outlines the responses to this question. Based on these results, additional information will be incorporated into future quarterly reports.

Table 3: Information to Include on Future Quarterly Reports

Information to Include	No. of Responses	Percent
Contributing factors	125	83.9
Victims by type	97	65.1
Events by industry type	95	63.8
GIS mapping of events	70	47.0
Length of evacuations	68	45.6
Rate of events per 100,000 pop.	26	17.4

The survey was also used to determine what information on the current report format was not useful and should be omitted from future quarterly reports. Table 4 outlines the responses to this question. Based on this data, it appears that the majority of respondents do not want any of the existing data omitted from future reports.

Table 4: Information to Exclude from Future Quarterly Reports

Information to Exclude	No. of Responses	Percent
Number of people evacuated	20	13.4
Injury outcomes	19	12.8
Number of evacuations	15	10.1
Interesting events	13	8.7
Statewide event totals	9	6.0
Types of injuries sustained	7	4.7
Number of victims	6	4.0
Names of substances released	3	2.0

The survey asked whether or not the Department of Health and Senior Services should continue preparing and distributing the following reports. The responses by type of agency are outlined in Table 5. This data indicates that the majority of respondents believe the reports should continue to be developed and distributed.

Table 5: Continuation of Quarterly Reports *

Type of Agency	Yes	No
Emergency Management	7	0
Fire Department	52	4
Hospital	23	2
Local Public Health Agency	8	0
Police Department	46	4
Other	3	0
TOTALS:	139	10

The survey was used to determine if agencies would utilize HSEES data if it were available for download from the HSEES web site. 124 of the 147 respondents answering this question (84.4%) indicated an interest in using the data for the purposes outlined in Table 6. This demonstrates the importance of having the HSEES data available for local prevention, education and training activities, as well as enhanced emergency response planning.

Table 6: HSEES Data Usage

Purpose	No. of Responses	Percent
Emergency planning	109	87.9
Enhanced training for responders	79	63.7
Information to general public	51	41.1
Information to industries	30	24.2
Other	5	4.0

Respondents were asked to rate how beneficial the quarterly reports were for their agencies. Table 7 outlines the responses received.

Table 7: Level of Benefit of Quarterly Reports *

Rating	No. of Responses	Percent
Very beneficial	16	11.0
Beneficial	71	48.6
Neutral	53	36.3
Not very beneficial	5	3.4
No benefit	1	0.7

Based on the results of this survey, it is clear that the majority of agencies receiving the reports find that they are beneficial and want the department to continue producing them. It is also clear that many agencies would use HSEES data for enhanced preparedness, education and training if the actual data were made available to them.

* Total of responses does not equal the total surveys received, as not all questions were answered on every survey that was returned.

Lessons Learned:

Feedback received from several agencies indicates that the reports provide valuable information to the local community. Other agencies in surrounding counties have expressed an interest in getting similar reports. Although we do not have the manpower required to produce quarterly reports for each county in Missouri, we do plan to develop annual reports for all of the counties in Missouri as outlined in the FFY'2001 Prevention Outreach Plan.

Evaluation Measures:

The quarterly reports are distributed to 412 agencies. In addition to providing these agencies with information regarding the HSEES program, the quarterly reports have increased the awareness of the potential risks for hazardous substance releases within the local area. Local public health agencies and LEPCs have contacted the HSEES Coordinator for additional information on specific events, and have asked to be notified of future events when they occur. Initial effectiveness measures indicated this activity would be considered successful if a decrease of 10% or more is noted in the number of events occurring in these ten counties, when compared to the baseline set in 2000. Increases were noted in only two counties – Greene and St. Charles; however, the majority of releases in these two counties were due to increased reporting in HMIS and occurred during loading/unloading at freight terminals. The percentage of change is indicated in the table below:

County	2000 Events *	2001 Events *	% Change
St. Louis City	56	43	-23.2
Jackson	35	31	-11.4
St. Louis	30	14	-53.3
Greene	18	34	88.9
Jasper	14	8	-42.9
Jefferson	10	6	-40.0
Clay	10	8	-20.0
Boone	8	6	-25.0
Marion	7	4	-42.9
St. Charles	5	19	380.0

* Methamphetamine-related events were excluded from these effectiveness measures analyses. Specific prevention activities geared toward preventing adverse human health outcomes have been initiated and included in the 2002 plan.

PREVENTION ACTIVITY #3

Description:

Design and develop a web site for the Missouri HSEES program.

Summary of Activities:

A web site has been developed and includes all of the fact sheets developed during Activity #1, in addition to the quarterly reports prepared for Activity #2. The web site also includes information on the HSEES program, the five-year data analysis, annual reports, prevention outreach activities, and other items of interest. Links to existing sites have been established to provide quick access to ATSDR, EPA, OSHA, NRC, other HSEES states, and other agencies that maintain information concerning hazardous substances on the Internet. Links have also been established to other Internet resources that provide information on specific substances and chemicals.

The availability of the web site was publicized through a variety of activities. Information on the web site was sent to all DOH employees and local public health agencies in the state through the "Friday Fax" that was distributed via e-mail on September 21, 2000 by the Center for Local Public Health Services. Approximately 5,800 postcards announcing the web site were mailed on October 23, 2000 to all county emergency management directors, Local Emergency Planning Committees (LEPC), county and local fire and police departments, county government officials, hospitals, local public health agencies, government agencies, and all facilities surveyed during Activity #1. The web site address is also provided during presentations given by the HSEES Coordinator, and is listed on all of the fact sheets prepared in Activity #1.

Lessons Learned:

We believe the web site is an invaluable tool to promote the HSEES program, in addition to providing educational materials and statistical reports to employees, first responders, members of the general public, and individuals involved in emergency management preparedness and response. We have received many positive comments from these groups regarding the content of the site and the materials that can be downloaded and printed directly from it. Individuals requesting additional information about the program via telephone or correspondence are given the web site address as a tool to educate them about the program, and allows them access to all educational materials that have been developed.

Evaluation Measures:

The web site was placed into operation and was publicized in September 2000. As of December 31, 2000, the site had received 7,144 hits (an average of 350 hits per week). For the period January 1 through December 30, 2001, the site received 26,329 hits (an average of 506 hits per week), for an increase of over 19%. As of December 15, 2002, the site had received 37,531 hits during calendar year 2002 (an average of 751 hits per week). The number of hits received and the increase in usage has demonstrated that the web site continues to be an effective awareness activity. It continues to be an accessible, inexpensive mechanism for sharing information with industries, employees, responders, emergency management agencies, and members of the general public.

PREVENTION ACTIVITY #4

Description:

Information on the HSEES program has been provided at conferences and training sessions sponsored by the State Emergency Management Agency (SEMA) and other agencies that target emergency management directors, responders, city/county officials, and other parties.

Summary of Activities:

HSEES program information has been presented at a number of conferences during the period covered by the prevention outreach plan. A complete listing of presentations and exhibits is included on page 9.

Lessons Learned:

These conferences attract a large number and variety of personnel from the target groups listed, and is one of the most effective methods available to establish relationships and share information with these groups. National, regional, statewide and local conferences allow us to reach the maximum number of people in the target groups in the most effective manner.

Feedback received during and after the presentations indicates that many of those in the target audience were unaware of the existence of the HSEES program. This has alerted us to the fact that significant efforts should be made to increase awareness of the existence and purpose of the HSEES program among responders, health care providers, emergency management organizations, and the general public.

Evaluation Measures:

This activity has significantly increased the knowledge of the HSEES program for the individuals attending these presentations. The presentations have also raised awareness at the local level of the impact of, and potential for, hazardous substance releases throughout the state.

**Missouri HSEE Program
Presentations/Exhibits
FFY'2000 Prevention Outreach Plan – Activity #4**

HAZMAT 2000 International Conference (St. Louis) - April 4, 2000

Topic: Presented information on the Prevention Outreach Plan

Audience: Responders (HAZMAT, fire, police), emergency management officials

No. of Attendees: 25

SEMA/MEPA Annual Conference (Lake Ozark) - April 24-26, 2000

Topic: Fact sheets on the top five substances most frequently released were made available to conference attendees

Audience: Responders, emergency management officials

No. of Attendees: 550

NEHA Annual Conference (Denver) - June 15, 2000

Topic: Presented information on the Prevention Outreach Plan; also made substance fact sheets available at the ATSDR exhibit booth

Audience: Environmental health staff, responders, emergency management officials

No. of Attendees: 40

Central District Local Health Administrators (Jefferson City) - August 7, 2000

Topic: Presented entire overview of the HSEES program, five-year data, prevention outreach activities, and the role of the local public health agency

Audience: Local public health agency administrators for counties in the Central District

No. of Attendees: 20

Northeast District Local Health Administrators (Macon) - August 31, 2000

Topic: Presented entire overview of the HSEES program, five-year data, prevention outreach activities, and the role of the local public health agency.

Audience: Local public health agency administrators for counties in the Northeast District

No. of Attendees: 15

Central States Agricultural Health and Safety Conference (Kansas) - September 21, 2000

Topic: Presented overview of the HSEES program, in addition to information on agricultural releases in Iowa and Missouri from 1993-1998. Data highlighted included seasonality of events; number and types of injuries reported; chemicals released; and chemicals involved in events with injuries. Also distributed Missouri's five substance fact sheets, in addition to Iowa's fact sheets on pesticides and ammonia.

Audience: Physicians, nurses, occupational and environmental health professionals, public health specialists, researchers, OSHA personnel, educators, extension safety specialists, agricultural engineers, insurance safety professionals, and farmers

No. of Attendees: 25